

## CLAIMS

### 1. New baker's yeasts which:

- have good general performances in not-delayed bread-makings, i.e. in bread-making processes which do not comprise a freezing or a deep-freezing step,
- are resistant with respect to the stress caused by freezing when they are used in sweetened doughs and
- do not give rise to the appearance neither of bad taste, nor of off-flavors in the presence of cinnamon.

### 2. New baker's yeasts according to claim 1, which:

- in not-delayed bread-makings, i.e. in bread-making processes which do not comprise a freezing or deep-freezing step, give rise in the fermentometer tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> hereabove defined in the specification to results which are at least equivalent to those obtained with a control yeast produced conventionally starting from the strain CNCM I-2412,
- from the point of view of their resistance against the stress caused by freezing, permit obtaining doughs corresponding to the formulation of sweet Danish pastries, comprising 18% sugar by weight with respect to the flour, which after freezing during 100 days at - 20 °C and after thawing,
  - give rise to a total gas release measured with the zymotachygraphe CHOPIN® during 2 hours and 30 minutes at 27 °C, higher by at least 20 % preferably by at least 30 % and still more preferably by at least 40 % with respect to control doughs of the same formulation which were frozen and thawed under the same conditions and which were manufactured starting from a control yeast obtained conventionally starting from the strain CNCM I-2412,
  - give rise to a proof time measured at 35 °C lower by 10 % preferably by 15 % and still more preferably by 20 % with respect to the proof time obtained with the above-said control doughs.

### 3. New baker's yeasts according to claim 1 obtained by a process comprising the use as starting strain of the strain deposited according to the Budapest

Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the number I-2421.

5 4. New baker's yeasts according to claim 1 obtained by a process comprising the use as starting strain of the strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the number I-2422.

10 5. New baker's yeasts according to claim 1 obtained by a process comprising the use as starting strain of a strain selected from the group consisting of the strains similar to the strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the numbers I-2421 and I-2422.

15 6. New baker's yeasts according to claim 1 obtained by a process comprising the use as starting strain of a baker's yeast strain resistant to the stress caused by freezing and obtained by clean inactivation of the PAD1 gene(s) encoding phenylacrylic acid decarboxylase, a clean gene inactivation being a modification which cuts out the expression of the inactivated gene(s) without  
20 leading to the expression of a heterologous gene.

7. New baker's yeasts according to claim 1 obtained by a process comprising the cultivation of a selected starting strain according to a process comprising a discontinuous inflow of molasses during the whole or part of the last cycle of cultivation.

25 8. New baker's yeasts according to claim 1 obtained by a process comprising:

- the use as starting strain of a strain selected from the group consisting of the strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the numbers I-2421 and I-2422, and the strains similar to the said two strains deposited under
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the numbers I-2421 and I-2422, and the baker's yeast strains obtained by clean inactivation of the PAD1 gene(s),

- a discontinuous inflow of molasses during the whole or part of the last cycle of multiplication of the said selected strain.

5    **9.**    New baker's yeasts according to claim 1 wherein the said bakers yeasts are in the form of a frozen intermediate active dry yeast product having between 70 and 80 % dry matter, preferably between 72 and 78 % dry matter, and still more preferably between 74 and 78%.

10    **10.**    New baker's yeasts according to claim 1 wherein the said bakers yeast are in the form of a frozen intermediate active dry yeast product having between 70 and 80 % dry matter, preferably between 72 and 78 % dry matter, and giving the following gas releases in the tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> hereabove defined in the specification:

test A<sub>1</sub> 170 ml to 190 ml in two hours

15    test A<sub>5</sub> 110 ml to 130 ml in two hours

test A<sub>6</sub> 115 ml to 140 ml in two hours.

20    **11.**    New baker's yeasts according to claim 1 obtainable by a process comprising the use as starting strain of a strain selected from the group consisting of the strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the numbers I-2421 and I-2422, and the strains similar to the said two strains deposited under the numbers I-2421 and I-2422, and the baker's yeast strains obtained by clean inactivation of the PAD1 gene(s), wherein the said bakers yeasts are in the form of a frozen intermediate active dry yeast product having between 70 and 25 80 % dry matter, preferably between 72 and 78 % dry matter, and giving the following gas releases in the tests A<sub>1</sub>, A<sub>5</sub>, A<sub>6</sub> hereabove defined in the specification:

test A<sub>1</sub> 170 ml to 190 ml in two hours

30    test A<sub>5</sub> 110 ml to 130 ml in two hours

test A<sub>6</sub> 115 ml to 140 ml in two hours.

12. New baker's yeasts in the form of particles of intermediate frozen active dry yeast having between 70% and 80% dry matter, preferably between 72 and 78%, which

- have good general performances in not-delayed bread-making i.e. in bread-making processes which do not comprise a freezing or a deep-freezing step,
- are resistant with respect to the stress caused by freezing when they are used in sweetened doughs and
- do not give rise to the appearance neither of bad taste, nor of off-flavors in the presence of cinnamon

and which give the following gaz releases in the test A<sub>1</sub>, A<sub>5</sub> and A<sub>6</sub> hereabove defined in the specification

test A<sub>1</sub> 170 ml to 190 ml in two hours

test A<sub>5</sub> 110 ml to 130 ml in two hours

test A<sub>6</sub> 115 ml to 140 ml in two hours

and which are obtainable by a process comprising:

- the use as starting strain of a strain selected from the group consisting of the strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the numbers I-2421 and I-2422, and the strains similar to the said two strains deposited under the numbers I-2421 and I-2422, and the baker's yeast strains obtained by clean inactivation of the PAD1 gene(s),
- a discontinuous inflow of molasses during the whole or part of the last cycle of multiplication of the said selected strain.

13. New baker's yeast strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, FRANCE, under the number I-2421.

14. New baker's yeast strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, FRANCE, under the number I-2422.

15. New baker's yeast strain obtained by clean inactivation of the PAD1 gene(s).
16. Process for the preparation of baker's yeasts comprising the use as starting strain of the strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the number I-2421.
17. Process for the preparation of baker's yeasts comprising the use as starting strain of the strain deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the number I-2422.
18. Process for the preparation of baker's yeasts comprising the use as starting strain of one of the strains selected from the group of the strains similar to the two strains deposited according to the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, Paris, under the numbers I-2421 and I-2422 and the baker's yeast strains obtained by clean inactivation of the PAD1 gene(s).
19. Process for the preparation of baker's yeasts according to one of claims 16, 17 and 18 wherein the said starting strain is cultivated according to a process comprising a discontinuous inflow of molasses during the whole or part of the last cycle of cultivation.
20. Process for the manufacture of bread-making doughs aromatized with cinnamon comprising the use of a new baker's yeast selected from the group consisting of the baker's yeasts having good general performance in not delayed bread-makings, resistant with respect to the stress caused by freezing when they are used in sweetened doughs, and not giving rise to the appearance of off-flavors in the presence of cinnamon or selected from the group consisting of the new baker's yeasts obtained by the process comprising the use as starting strain of one of the strains of the group comprising the strains deposited according the Budapest Convention with the "Collection Nationale de Cultures de Microorganismes", Institut Pasteur, 28 rue du Docteur Roux, 75724 PARIS CEDEX 15, under the numbers I-2421 and I-2422, and the similar strains to the said strains I-2421 and I-2422, and the baker's yeast strains obtained by clean inactivation of the PAD1 gene(s).

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